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Cooperative ECONOMIC INSECT REPORT

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ECONOMIC INSECT SURVEY AND DETECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

EUROPEAN CORN BORER larvae heavy in experimental corn plots, expect extensive cob droppage in South Dakota. Heavier than usual in ears of sweet corn in Wisconsin and damaging tassels in South Carolina. (p. 709).

VARIABLE OAK LEAF CATERPILLAR defoliating oak in southern Missouri. (p. 712).

HORN FLY heavy on cattle in Nebraska and Oklahoma. (p. 713).

A SUBTERRANEAN TERMITE damaged rolled newsprint in Colorado. (p. 714).

Detection

New State records include a CONIFER APHID from Maryland and a MEGALOPYGID MOTH from South Carolina. (p. 712).

For new county records see page 715.

Reports in this issue are for week ending October 2 unless otherwise indicated.

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WEATHER OF THE WEEK ENDING OCTOBER 5

HIGHLIGHTS: Last week was notable for an abundance of bright sunshine, pleasant temperatures, and the absence of storms.

PRECIPITATION: For the Nation as a whole, the past week has been one of the driest in many months. Except for a few light to moderate showers in the Atlantic Coastal States early in the week, precipitation was mostly light and widely scattered. A few flakes of wet snow mixed with rain fell in some higher elevations in southern New York late Tuesday night and dense fog covered central and southern Maine early Friday morning. Brief scattered showers and thunderstorms interrupted the fine weather in southern Florida Friday and early Saturday. Rains also fell late in the week from southern California to western Texas. Tucson, Arizona, received over an inch of rain in one hour late Friday evening. The total rain for the week at Tucson, 1.73 inches, is more than 2.5 times the September normal. The rains in the Southwest helped bring the brush fires under control. The weekend brought light snow flurries to northeastern Minnesota and Upper Michigan; heavy thunderstorms, some with hail, to New England; and thundery weather to the Southwest and to the lower Rio Grande Valley. A large area from Oregon and California (except the extreme south) to the central and southern Appalachians and from the Canadian border to the Gulf of Mexico received no rain during the week.

TEMPERATURE: Bright sunshine and unusually pleasant autumn temperatures prevailed over most of the Nation last week. Afternoon temperatures reached the 80's from the northern Great Plains to Texas and eastward to the Florida Peninsula on Wednesday afternoon. Cooler weather prevailed over the Northeast in sharp contrast to that of the previous week. On Monday morning, September 28, subfreezing temperatures occurred over northern Minnesota, western Wisconsin, and Upper Michigan. Temperatures dropped below freezing several mornings in parts of the Great Basin and the northern and central Rocky Mountains. Elsewhere minimums ranged from the 40's in the North to the 50's and 60's in the South. In general, temperatures averaged above normal from the Pacific Ocean to northern and central Great Plains and below normal over the rest of the Nation. (Summary supplied by Environmental Data Service, ESSA).

Weather continued on page 716.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

CORN EARWORM (Heliothis zea) - NEW HAMPSHIRE - First adult of season in black-light trap at Lee, Strafford County, September 20. (Blickle). ARIZONA - Heavy in late-planted sweet corn at Safford, Graham County. (Ariz. Coop. Sur.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - ARIZONA - Averaging 100 per 100 sweeps in few fields at Goodyear, Maricopa County. (Ariz. Coop. Sur.).

CORN, SORGHUM, SUGARCANE

CORN ROOTWORMS (Diabrotica spp.) - OKLAHOMA - Adults of D. virgifera (western corn rootworm) and D. undecimpunctata howardi (southern corn rootworm) remain common in irrigated corn in Texas and Cimarron Counties. (Okla. Coop. Sur.). MINNESOTA - Surveyed 54 counties in August and populations increased 128 percent. Adults of D. virgifera (western corn rootworm) increased in southwest, south-central, southeast, and central districts and remained about same in west-central district. Now dominant in southwest, south-central, and west-central districts. D. longicornis (northern corn rootworm) dominant in southeast, central, and east-central districts. Survey showed corn rootworm problems remain in fields where corn follows corn. Infestations 97.4 percent in fields that had been in corn 2 or more years; and 2.6 percent in first year cornfields. Percent lodged plants increased in all districts surveyed; ranged 2.11 to 9.81. (Minn. Pest Rpt.).

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEW HAMPSHIRE - Survey indicates second brood survival unusually heavy. Infestation 100 percent in 10 acres of commercial sweet corn at Litchfield, Hillsborough County, September 20-24. (Blickle). WISCONSIN - Larvae heavier than normal in ears of late sweet corn. (Wis. Ins. Sur.). SOUTH DAKOTA - Very heavy in experimental corn plots in Clay County. Larvae averaged 550 per 100 stalks; up to 16 in individual stalks. Extensive cob droppage expected. (Jones). KANSAS - Evidence indicates few third-generation larvae near maturity in late-planted corn in some counties of northeast, north-central, and east-central crop reporting districts. Most bored into stalks but still many half-grown larvae found feeding at bases of leaf sheaths and shucks. (Bell). SOUTH CAROLINA - Very damaging to tassels of fall sweet corn in Marion, Florence, and Williamsburg Counties. (Thomas, Sept. 30).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - ARIZONA - Twenty percent of late-planted milo treated in Pima County. (Ariz. Coop. Sur., Sept. 25). NEW MEXICO - Heavy on corn in Luna and Dona Ana Counties. (Riddle). OKLAHOMA - In 2 untreated cornfields in Cimarron County 3 percent of stalks lodged. Larvae moved into roots. (Okla. Coop. Sur.).

SORGHUM WEBWORM (Celama sorghiella) - ARKANSAS - Counts of 100+ per row foot in heads of late silage sorghum in Lee County field. Treatments planned. (Kimbrough).

FALL ARMYWORM (Spodoptera frugiperda) - KANSAS - Small to three-fourth grown larvae averaged 0.6 per stalk in one field of very late corn in Riley County. Feeding on ears, shucks, and leaf sheath bases. (Bell).

CHINCH BUG (Blissus leucopterus) - KANSAS - Adults averaged 25 per plant along with occasional late instar nymphs found behind leaf sheaths and shucks in one field of grassy upland corn in south-central Cloud County. (Bell).

SMALL GRAINS

WHEAT STEM SAWFLY (Cephus cinctus) - NORTH DAKOTA - Surveyed 80 hard red spring wheat stubble fields in 10 counties. Cut stems ranged 0-9.3 (averaged 0.8) percent, a 0.1 percent decrease from 1969, in all counties surveyed. Infested fields ranged 20-83 (averaged 52) percent, a decrease from 63 percent found in 1969. Decrease in cutting attributed to late seeding of wheat. (Brandvik).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Heavy in 80 acres of young barley in Cotton County. Controls planned. (Okla. Coop. Sur.).

TURF, PASTURES, RANGELAND

FALL ARMYWORM (Spodoptera frugiperda) - SOUTH CAROLINA - Majority of moths in flight at Clemson, Union, Spartanburg, Greenville, and other upper Piedmont localities. (Nettles, Sept. 30). ALABAMA - Damaged several hundred acres of Coastal Bermuda grass and other grass hay crops in Jefferson, Chambers, Butler, Covington, Barbour, and Clarke Counties. Few infestations noted in mixed grass permanent pastures in Jefferson County. (Johns et al., Sept. 25).

FORAGE LEGUMES

ALFALFA CATERPILLAR (Colias eurytheme) - ARIZONA - Larvae 130 per 100 sweeps in alfalfa field at Blaisdell, Yuma County. (Ariz. Coop. Sur.). NEW MEXICO - Adults light to heavy on alfalfa in Chaves and Eddy Counties. Larvae averaged 2-8 per 25 sweeps. (Mathews). UTAH - Larvae averaged 0.8 per 10 sweeps in Salt Lake County alfalfa. (Knowlton).

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - Larvae averaged 320 per 100 sweeps in alfalfa field in Yuma Valley, Yuma County; averaged 50 per 100 sweeps in Salt River Valley, Maricopa County. (Ariz. Coop. Sur.).

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Heavy on alfalfa in Craig County. (Okla. Coop. Sur.).

A LEAF ROLLER MOTH (Platynota stultana) - ARIZONA - Averaged 30 per 100 sweeps of alfalfa at Yuma, Yuma County. (Ariz. Coop. Sur.).

SWEETCLOVER WEEVIL (Sitona cylindricollis) - NEBRASKA - Averaged 5 per sweep in fields near Palmyra, Otoe County. (Beland, Stevens).

CORN ROOTWORMS (Diabrotica spp.) - WISCONSIN - D. virgifera (western corn rootworm) and D. longicornis (northern corn rootworm) adults continue to be active, particularly in alfalfa. (Wis. Ins. Sur.).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Average per 100 sweeps of alfalfa: 480 at Blaisdell, Yuma County; 1,000 in Salt River Valley, Maricopa County. (Ariz. Coop. Sur.).

SOYBEANS

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - MISSISSIPPI - Larvae averaged 5 per 2 row feet in 8 Oktibbeha County fields. (Sartor). FLORIDA - Larval populations reduced to near zero, primarily by fungus, Spicaria rileyi, at Quincy, Gadsden County. Treated commercial soybeans in good condition; untreated fields reduced to stalks in Gadsden and Jackson Counties. (Greene).

SOYBEAN LOOPER (Pseudoplusia includens) - OKLAHOMA - Defoliated soybeans in Chickasha area of Grady County. (Okla. Coop. Sur.). ARKANSAS - High populations of this and Trichoplusia ni (cabbage looper) declined in Jefferson County. Heavy infestations limited to few localized areas, but a few thousand acres partly to fully defoliated. P. includens probably responsible for most heavy defoliation. Soybean looper less effectively controlled by disease than cabbage looper. Prospective yields expected to be reduced. No treatments applied. (Schroeder, Boyer). MISSISSIPPI - Larvae averaged less than 1 per 2 row feet in 8 Oktibbeha County fields. (Sartor).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - SOUTH CAROLINA - Much damage found near Hartsville, Darlington County. (Nettles, Sept. 30).

BROWN STINK BUG (Euschistus servus) - ALABAMA - This species and Nezara viridula (southern green stink bug) developed to damaging numbers in several soybean fields in Covington County. (Linder).

GREEN STINK BUG (Acrosternum hilare) - MISSISSIPPI - Adults averaged less than 1 per 2 row feet in 8 Oktibbeha County fields. (Sartor).

STRIPED BLISTER BEETLE (Epicauta vittata) - MISSISSIPPI - Adult damage heavy to several Oktibbeha County fields. (Sartor).

COTTON

BOLLWORMS (Heliothis spp.) - OKLAHOMA - H. zea heavy in Bryan County, and moderate to heavy in Marshall County. Larval collections continue to average 50 percent H. virescens (tobacco budworm) in Chickasha area of Grady County. (Okla. Coop. Sur.).

COTTON LEAF PERFORATOR (Bucculatrix thurberiella) - ARIZONA - Larval damage heavy to 200 acres of cotton at Casa Grande, Pinal County. (Ariz. Coop. Sur.).

SOYBEAN LOOPER (Pseudoplusia includens) - OKLAHOMA - Defoliated cotton in scattered fields in Grady County. (Okla. Coop. Sur.).

A PLANT BUG (Neurocolpus nubilus) - ALABAMA - Adults collected from blooms and squares in large field in Colbert County August 18. Adults about one per 10 row feet with most noticeable damage to blooms. First report of this plant bug in cotton in Alabama, although it may have previously occurred. Determined by J.L. Herring. (McQueen, Sept. 25).

SUGAR BEETS

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - Larvae averaged 4 per plant on about 260 acres of sugar beets at Casa Grande, Pinal County. (Ariz. Coop. Sur.).

POTATOES, TOMATOES, PEPPERS

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - CALIFORNIA - Adults 3 per sweep of tomatillo plants in 10-acre planting at Fontana, San Bernardino County. (Cal. Coop. Rpt.).

GENERAL VEGETABLES

CABBAGE LOOPER (Trichoplusia ni) - NEW MEXICO - Hatch heavy on lettuce in Dona Ana and Luna Counties. Treatments frequent. (N.M. Coop. Rpt.). ARIZONA - Averaging 4 eggs per lettuce plant. (Ariz. Coop. Sur.).

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - One egg mass per 10 lettuce plants in 4 Maricopa County fields. Majority of fields dusted or sprayed. (Ariz. Coop. Sur.).

GARDEN SYMPHYLAN (Scutigerella immaculata) - OREGON - Severely damaged 4-acre nursery planting of asparagus at Keizer area, Marion County. Loss of marketable plants estimated at about 25 percent. Symphylans very abundant 21 days ago. (Penrose).

DECIDUOUS FRUITS AND NUTS

ORIENTAL FRUIT MOTH (Grapholitha molesta) - COLORADO - Adults up to 3 per trap in Mesa County; as high as 27 per trap west of Palisade. Fruit damage up to 3 percent; as high as 30 percent west of Palisade. Integrated biological and spray program apparently very effective. (Sisson, Anderson).

PEACH TWIG BORER (Anarsia lineatella) - COLORADO - Larval damage ranged 15-20 percent in poorly sprayed orchards in Mesa County. (Sisson, Anderson).

A TORTRICID MOTH (Platynota idaeusalis) - PENNSYLVANIA - Injury evident on various apple varieties in Adams and Franklin Counties. Collected on apple by D. Asquith and R.B. Colburn, July 10. Determined by R.W. Hodges. (Asquith).

SAN JOSE SCALE (Quadraspidiotus perniciosus) - DELAWARE - Severe enough in Kent County apple orchard to appear on calyx end of harvested fruit. (Burbutis et al.).

PECAN WEEVIL (Curculio caryae) - NEW MEXICO - Two adults trapped week ending August 28 on property at Tularosa, Otero County, where infested nuts found in December 1969. Nuts from trees infested in 1969 and from adjoining trees to be burned before larvae emerge. All surveys at Tularosa and Alamogordo, Otero County, negative since mid-September. Sprays in infested area applied every 7 days. (N.M. Coop. Rpt.).

FALL WEBWORM (Hyphantria cunea) - ALABAMA - Heavy and widespread in pecan trees in Dallas, Elmore, and Montgomery Counties. (Alsobrook et al.).

WALNUT CATERPILLAR (Datana integerrima) - ARKANSAS - Completely defoliated many pecan trees in Ashley County. No controls due to "off year" for pecans and very few nuts. (Ferguson, Boyer).

BLACK PECAN APHID (Myzocallis caryaefoliae) - ALABAMA - This species, Monellia spp., and mites still heavy on thousands of unsprayed pecan trees. Damage along with physical and nutritional conditions of unknown causes continues in south and central areas. Premature leaf drop in many areas past 7-21 days. Suspect black pecan aphid major cause. (Kirkpatrick et al.).

WALNUT HUSK FLY (Rhagoletis completa) - UTAH - Moderate on black and English walnuts at Salt Lake City, Salt Lake County. (Knowlton).

ORNAMENTALS

A MEALYBUG (Pseudococcus microcirculus) - CALIFORNIA - Infested orchids in orchid house at San Bernardino, San Bernardino County. Under treatment. (Cal. Coop. Rpt.).

FOREST AND SHADE TREES

A CONIFER APHID (Cinara palmerae) - MARYLAND - Collected on blue spruce at College Park, Prince Georges County, by D. Shriver, June 10, 1970. Determined by L.M. Russell. This is a new State record. (U. Md., Ent. Dept.).

A MEGALOPYGID MOTH (Norape ovina) - SOUTH CAROLINA - Larvae collected from redbud at York, York County, by J.D. Williams, September 2, 1970. Determined by R.C. Fox. This is a new State record. (Nettles).

VARIABLE OAK LEAF CATERPILLAR (Heterocampa manteo) - MISSOURI - Still defoliating oak throughout southern areas. Seriously defoliated several hundred acres of oak in Iron County. (Kearby, Gass).

ELM LEAF BEETLE (Pyrrhalta luteola) - IOWA - Specimens collected in house September 9 at Moorhead, Monona County, for a new county record. (Iowa Ins. Sur.).

TWIG GIRDLER (Oncideres cingulata) - ARKANSAS - First girdling of season in Washington County. Girdled hickory limbs on ground. (Boyer).

OYSTERSHELL SCALE (Lepidosaphes ulmi) - NEVADA - Heavy on cottonwood and willow at Elko, Elko County. (Peters).

PAINTED MAPLE APHID (Drepanaphis acerifoliae) - ARKANSAS - First infestations of fall season on maple in Washington County. (Boyer).

MAN AND ANIMALS

SCREW-WORM (Cochliomyia hominivorax) - One case reported in U.S. September 27 to October 3 as follows: NEW MEXICO - Luna 1. Total of 195 laboratory-confirmed cases reported in portion of Barrier Zone in Republic of Mexico September 20-26 as follows: Sonora 97, Chihuahua 87, Coahuila 1, Nuevo Leon 4, Tamaulipas 6. Total of 136 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screw-worm flies released: Texas 44,868,000; New Mexico 6,600,000; Arizona 7,350,000; Mexico 78,176,000. (Anim. Health Div.).

HORN FLY (Haematobia irritans) - OKLAHOMA - Ranged 400-600 per head on cattle checked in Payne, Noble, and Cimarron Counties. Heavy in Cotton and Marshall Counties. Moderate in Craig County. NEBRASKA - Ranged 400-500 per animal on 3 untreated range herds in Keith County and on 5 river bottom and canyon herds in Lincoln County week of September 25; currently 400 per animal on untreated herds near North Platte, Lincoln County. (Campbell). FLORIDA - Adults averaged 150 per animal at Ona, Hardee County. (Butler).

FACE FLY (Musca autumnalis) - NEBRASKA - Some light hibernation activity in Lancaster County, but no large numbers at wintering sites yet. (Jones). Ranged 1-2 per animal on range herds at North Platte, Lincoln County. (Campbell). NORTH DAKOTA - Adults averaged less than one per beef cattle in Divide and Williams Counties. These are new county records. (Brandvik). Now statewide. (PPD).

MOSQUITOES - CALIFORNIA - Increased noticeably in Sacramento and upper San Joaquin Valleys due to rice harvest. Many complaints from cities as influx of mosquitoes increases. Unusually warm days and nights favored pest. (Cal. Coop. Rpt.). WASHINGTON - Aedes dorsalis adults heavy in orchard and golf course September 19 at Rock Island, Douglas County. Apple pickers quit because of severity of attack. (Rushmore, Retan).

CATTLE TAIL LOUSE (Haematopinus quadripertusus) - FLORIDA - Adults averaged 10, eggs 100, per tail on untreated cattle at Ona, Hardee County. (Butler).

A VESPID WASP (Vespula pensylvanica) - CALIFORNIA - Primarily this wasp continues nuisance and menace in many areas. Higher elevations now support greater numbers. Adults 50-2,500 per control trap. (Cal. Coop. Rpt.). OREGON - V. pensylvanica still troublesome at Medford, Jackson County. Special traps placed at various localities to help alleviate problem. (Berry).

PULICID FLEAS (Ctenocephalides spp.) - CALIFORNIA - Mass numbers of C. felis (cat flea) and C. canis (dog flea) invaded yards and residences; complaints numerous. Stray cats responsible for majority of fleas, but dog fleas more evident this fall than in past. (Cal. Coop. Rpt.).

BROWN DOG TICK (Rhipicephalus sanguineus) - NEVADA - Above normal populations and numbers of dogs infested at Las Vegas, Clark County. (Zoller).

TICK SURVEILLANCE - Survey throughout the U.S. and Puerto Rico is to show seasonal distribution of potential vectors and hosts of livestock diseases, and to detect exotic species. Some of the more interesting determinations for September were as follows: Boophilus spp. (cattle fever ticks) TEXAS - bovine. Octobius megnini (ear tick) OREGON - canine, bovine; WASHINGTON - canine; OKLAHOMA - bovine;

HAWAII - bovine; COLORADO - bovine, canine. Amblyomma cajennense (Cayenne tick) TEXAS - bovine. Anocentor nitens (tropical horse tick) PUERTO RICO - bovine; TEXAS - horse. (Anim. Health Div.).

BLACK WIDOW SPIDER (Latrodectus mactans) - IDAHO - Concern by homeowners as fall migration into homes continues at Fort Hall, Bingham County, September 25. (Kunkel).

HOUSEHOLDS AND STRUCTURES

HIDE BEETLE (Dermestes maculatus) - CALIFORNIA - Larvae 12 per square yard in wooden building at Escondido, San Diego County. (Cal. Coop. Rpt.).

STORED PRODUCTS

A SUBTERRANEAN TERMITE (Reticulitermes tibialis) - COLORADO - Damaged $5,000+ of rolled newsprint in storage at Denver, Denver County. Controls applied. Determined by F.W. Lechleitner. (Thatcher).

INDIAN-MEAL MOTH (Plodia interpunctella) - OKLAHOMA - Heavy in stored grain in Texas County. (Okla. Coop. Sur.).

BENEFICIAL INSECTS

A PUNCTURE-VINE SEED WEEVIL (Microlarinus lareynii) - ARIZONA - Larvae infested all seed of puncture-vine examined in area of Casa Grande, Pinal County. (Ariz. Coop. Sur., Sept. 23).

LADY BEETLES - NEBRASKA - Very abundant in sweetclover fields in Otoe County, averaged about 3 per sweep; almost all adults. (Beland, Stevens).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

EUROPEAN CRANE FLY (Tipula paludosa) - WASHINGTON - One adult male collected in home on Lummi Island, Whatcom County. This is first record on Lummi Island. (PPD, Holland).

GRASSHOPPERS - ARIZONA - Melanoplus sp. 70 per 100 sweeps in Gila Valley field, Yuma County. (Ariz. Coop. Sur.). KANSAS - Grasshoppers severely damaged early wheat along borders of some fields in northwest Finney County. (Maddux).

JAPANESE BEETLE (Popillia japonica) - ILLINOIS - Adult trapped at South Beloit, Winnebago County. Collected by R. Johnson August 7. Determined by R.D. Gordon. This is a new county record. (PPD).

ORIENTAL FRUIT FLY (Dacus dorsalis) - CALIFORNIA - Two males trapped at Lakewood and East Long Beach, Los Angeles County, September 30. Areas 1.5 miles apart and 4 miles from previous Los Alamitos collection in Orange County. New area within 20-traps-per-square-mile area associated with Orange County finds. This makes total of 6 flies trapped in State during this episode. Larval checks negative and trapping in new area immediately stepped up to eradication levels. Source of flies not established. (Cal. Coop. Rpt.).

PINK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - Larvae 2 per hibiscus plant at Winterhaven, Imperial County. (Cal. Coop. Rpt.). Release of 4,240,084 sterile moths September 25 to October 1 at Bakersfield, Kern County; total to date 59,172,640. ARIZONA - Release of 67,500 sterile moths at Redington, Pima County; total to date 1,417,300. Infested in Redington field, 95 of 500 bolls for 19 percent infestation, increased from 1.9 percent 7 days ago. A 41 percent infestation found in field at Monmouth about 25 miles north; 17 percent field infestation at Pomerene about 30 miles south. Five native and four sterile moths trapped in Redington field for respective season totals of 39 and 235. (PPD).

Infestations widely scattered in Salt River Valley. Few growers still irrigating in Maricopa, Pima, and Yuma Counties. Cotton in many areas defoliated, but in many cases second treatment required. Some farmers at Blaisdell, Yuma County, picked cotton and plowing fields. (Ariz. Coop. Sur.). NEW MEXICO - Adults 102 in 10 hexalure traps in southern Eddy County. Infested 32 percent of bolls. (Mathews).

A WHITE-FRINGED BEETLE (Graphognathus peregrinus)-TEXAS - Adults collected at Jasper, Jasper County, by I.O. Ochoa September 29. Determined by V.H. Owens, confirmed by R.E. Warner. This is a new county record. (PPD).

HAWAII INSECT REPORT

Turf and Pastures - Larvae and pupae of a GRASS WEBWORM (Herpetogramma licarsisalis) trace, averaged 0.5 per square foot, in 5 acres of Kikuyu grass at Haiku, Maui. Trichogramma semifumatum (a minute egg parasite) parasitized 87 percent of 46 webworm eggs. Averaged 10 adults per sweep of Kikuyu grass at Mililani Memorial Park, Oahu. A parasitic TACHINA FLY (Eucelatoria armigera) abundant; as many as 20 adults per sweep. (Ah Sam et al.).

General Vegetables - SOUTHERN GREEN STINK BUG (Nezara viridula) nymphs and adults trace in backyard planting of long beans at Ewa, Oahu; heavy, 27 nymphs on one bush. Nymphs and adults moderate in small backyard planting of lima beans at Haiku; eggs of a parasitic TACHINA FLY (Trichopoda sp.) on some adults. (Ah Sam et al.). Larval mines of LEAF MINER FLIES (Liriomyza spp.) heavy in older leaves in 4 acres of watermelon at Waimanalo, Oahu; adults as many as 12, averaged 4 per leaf. Mines moderate in older leaves in 1.5 acres of tomato at Waianae, Oahu; adults 1 per 2 leaves, as many as 6 per leaf. (Kawamura). Larval mines of BEAN FLY (Melanagromyza phaseoli) heavy, adults moderate, average 5-6 per young seedling in small backyard planting of snap beans at Makawao, Maui. Adults trace in backyard snap bean planting at Haiku. Adults and larval mines light in small unsprayed snap bean planting at Waianae; severely damaged 80 percent of soybean seedlings. (Miyahira, Kawamura).

Fruits - ORIENTAL FRUIT FLY (Dacus dorsalis) adults heavy in 5 acres of avocado, grapefruit, and pummelo at Lihue, Kauai. Oviposition in fresh and fallen fruits. A parasitic BRACONID (Opius sp.) light. (Sugawa).

Shade Trees - Larvae of a NOCTUID MOTH (Melipotis indomita) heavy in debris at base of monkey-pod trees and under loose bark at Naalehu, Hawaii. (Yoshioka).

Beneficial Insects - Larvae of a SYRPHID FLY (Allograpta obliqua) and a brown lacewing feeding on nymphs and adults of Psylla uncatoides (a psyllid) along Mauna Loa strip road and at Kipuka Ki, Hawaii Volcanoes National Park, Hawaii, June 22, 1970. No predators of P. uncatoides previously reported in Hawaii. On August 28, larvae of a brown lacewing and a GREEN LACEWING (Anomalochrysa hepatica) in same area under same host situation. (Beardsley).

DETECTION

New State Records - A CONIFER APHID (Cinara palmerae) MARYLAND - Prince Georges County (p. 712). A MEGALOPYGID MOTH (Norape ovina) SOUTH CAROLINA - York County (p. 712).

New County Records - ELM LEAF BEETLE (Pyrrhalta luteola) IOWA - Monona (p. 712). FACE FLY (Musca autumnalis) NORTH DAKOTA - Divide, Williams (p. 713). JAPANESE BEETLE (Popillia japonica) ILLINOIS - Winnebago (p. 714). A WHITE-FRINGED BEETLE (Graphognathus peregrinus) TEXAS - Jasper (p. 715).

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap (BL - blacklight, I - incandescent, MV - mercury vapor, O - other)	Agrotis ipsilon (black cutworm)	Carpocapsa pomonella (codling moth)	Chorizagrotis auxiliaris (army cutworm)	Estigmene acrea (salt-marsh caterpillar)	Paronta diffusa (wheat head armyworm)	Peltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Loxostege commixtalis (alfalfa webworm)	Loxostege similalis (garden webworm)	Loxostege sticticalis (beet webworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Prodenia ornithogalli (yellow-striped armyworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Trichoplusia ni (cabbage looper)	Crops
FLORIDA																								
Gainesville 9/25-29			BL	1			1		5	9	1						1				10	31		
KANSAS																								
Colby 9/23			BL	1		2					1						2							
Garden City 9/21, 23			BL								28						6	1				4		
Great Bend 9/17-30			BL	16		1					191						14	11	14			2		
Hiawatha 9/19			BL	1				12			144				2		54	3	4				2	
Manhattan 9/30			BL			1		5			56				1		1	1		1			1	
Tribune 9/21, 24, 28			BL	3		12					93							4		1		3		
MISSISSIPPI																								
Stoneville 9/25-10/1	48-84	0.15	2BL	25			17		204	92	2182								1647	192	1938	333	822	
MISSOURI (County)																								
Greene 9/24-30			BL	9							193								4	6				
NEBRASKA																								
Lincoln 10/2			BL	10				1			179						6	5	5			5		
TENNESSEE (County)																								
Hardeman 9/25-10/2			BL	229							56				2		14		49	32		10	100	
Haywood 9/25-10/2			BL	28						4	90				1		120	4	13	49		20	162	
Madison 9/25-10/2			BL	9							31						13		2	7		19	21	
Shelby 9/25-10/2			BL	4							20								8	10		1	46	
Tipton 9/25-10/2			BL	1							19						1		1	1			7	
TEXAS																								
Waco 9/25-10/1			BL	7					74	138	158							49	93	447	347	138	55	
WISCONSIN																								
De Forest 9/22-28			BL	3							23							4		7				
Hancock 9/21-27			BL	4							12						1	2		1		7		
Platteville 9/24-30			BL								16						2	2		2				

Weather continued from page 708.

WEATHER BUREAU'S 30-DAY OUTLOOK

OCTOBER 1970

The Weather Bureau's 30-day outlook for October is for temperatures to average below seasonal normals over the eastern half of the Nation as well as the southern Plains. Above normal temperatures are indicated west of the Divide and in western portions of the northern and central Plains. Elsewhere near normal temperatures are in prospect. Precipitation is expected to exceed normal over the south Atlantic Coast States. Subnormal totals are indicated for the western two thirds of the Nation except for near normal along the southern border and the north Pacific coast. In unspecified areas near normal precipitation is expected.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the Weather Bureau. You can subscribe through the Superintendent of Documents, Washington, D.C. 20250. Price $5.00 a year.

UNITED STATES DEPARTMENT OF AGRICULTURE
Hyattsville, Maryland 20782

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